

**Location:** Virtual  
**Address:** Zoom Call  
**Purpose:** Bi-Monthly Meeting  
**Date and Time:** August 10, 2021 from 11:30 a.m. – 1:00 p.m.  
**Distribution:** Los Angeles WaterReuse Association Chapter Members and Supporters

Below is a summary of the highlight from the August 2021 bimonthly member meeting of the Los Angeles Chapter of the WaterReuse Association.

The presentations from this meeting can be found at:  
<http://www.watereuse.org/sections/california/losangeles/meetings>

**1. Host Presentation: Treatment Plant Update: Operation and Optimization (Everett Ferguson, Brittany Liu / WRD)**

WRD oversees three treatment plants including Albert Robles Center (ARC) Advanced Water Treatment Facility (AWTF), the Leo J. Vander Lans (LVL) AWTF and the City of Torrance (a.k.a. Goldsworthy) Desalter. The total budget to operate the three plants is \$18.5 million each year. The operations and maintenance (O&M) budgets were developed based on production goals, historical FYs' expenses and revenues, such as the MWD LRP program. The future operational goals include achieving the production target and optimizing operations.

The ARC AWTF is targeted to produce 10,000 acre-feet (AF) and the production achieved in 2020 was 11,300 AF, whereas the Torrance Desalter is targeted to produce 3,500 AF, however in 2020 only achieved 2,700 AF. The LVL AWTF is targeted at 3,500 AF and achieved 3,800 AF in 2020. Additional goals for the LVL AWTF include maximizing the recycled water contribution (RWC) to the "LA-side" of the Alamitos Seawater Intrusion Barrier to achieve WRD water independence at the barrier.

Treatment plant optimization has focused on procedural improvements include SOP development at the ARC and LVL AWTFs, e-documentation including operator logs via tablets and Google docs for ARC and LVL AWTFs, implementation of a CMMS System at all three facilities, and an implementation of a well maintenance program at the Torrance Desalter. Modifications to treatment processes include chemical usage, membrane replacement and UV system operation mode at the ARC AWTF. The outcomes from optimization include goals of maximizing production and reducing the unit cost of production (\$/AF) for fixed costs such as operational staffing and variable costs such as chemicals, utilities analytical, etc. Significant optimization opportunities were also identified for chemical usage at the ARC AWTF. Post-treatment chemical stabilization is provided since the reverse osmosis (RO) permeate is aggressive due to lack of minerals. Chemicals are added to reduce the corrosivity by adding alkalinity/hardness, with a goal of maintaining an Langlier Saturation Index (LSI) target of  $\pm 0.5$ . During plant commissioning, the contractor changed post treatment chemicals from calcium hydroxide (costing an average of \$93,014 per month) to calcium chloride (costing an average of \$17,023 per month) to achieve specified permit turbidity requirements. WRD petitioned the Regional Board to relocate the turbidity compliance point to upstream of the post treatment chemical addition point since the addition of corrosion control chemicals cause turbidity but do not introduce pathogens. Turbidity values in excess of 0.2 NTU are viewed as false indicators of pathogens. The addition of alkalinity using CaCl was replaced with CaOH, saving nearly \$20K per month. The combination of these two replacement chemicals saves WRD over \$1M per year.

As a brief update for the optimization of LVL and the Torrance Desalter Facilities, the LVL AWTF has increased baseline production to meet the overall barrier demand on the LA side. The goal is to achieve this for the entire barrier, including the Orange County side of the barrier, which will require additional projects over the next couple of years. The recovery rate of the Torrance Desalter has been improving with a new clean-in-place program to address biofouling issues. There have also been well runtime issues due to clogging that are being addressed.

**2. Technical Topic: Mysteries and Myths of Microplastics Management** (*Shelly Walther / LACSD*)

Shelly Walther is an environmental scientist at LA County Sanitation Districts (LACSD) and has worked to protect public health for over 20 years. She is widely recognized for her technical expertise in microplastics, ocean acidification, climate change, effective study design and data quality and for transforming complex ecological data into information to better assess ecosystem health.

It is mostly a myth that wastewater treatment plants (WWTPs) discharge mass quantities of microplastics affecting the environment. There has been an exponential increase of microplastic research papers since 2004. Major studies have shown that there is no relationship between wastewater treatment plant outfall locations and microplastic pollution amounts. It has been shown that there are negligible amounts of microplastics in secondary or tertiary WWTPs. There are particles that look much like microplastics but are not, such as denim, cotton, natural fibers, skin or hair, etc. Many studies use visual identification to identify microplastics, however, the best way to identify microplastics is through chemical confirmation. A recent study of 28 Chinese WWTPs estimated the total amount of microplastics in sludge from all Chinese WWTPs to be 156 trillion particles per year. In another study, it was stated that one large Swedish treatment plant discharged 1 billion particles. From these two studies, one could incorrectly conclude that all plants in China were equivalent in microplastic amounts to the one plant in Sweden. Sample processing is also important to not include fibers from toilet paper, hair, etc. within the amount identified as microplastics.

In 2018, legislative mandates came about including SB1422: CA Safe Drinking Water Act: Microplastics and SB 1263: Ocean Protection Chemicals (OPC) Statewide Microplastics Strategy. Upcoming funded research also includes the Southern California Coastal Water Research Project's (SCCWRP) microplastics method evaluation study, a Microplastics Risk Assessment, and an OPC POTW microplastics study. SB 1422 formally defines microplastics from 1 nanometer to 5 millimeters in size including synthetics and some semi-synthetics. A standard method for drinking water will be adopted including four years of mandatory testing, a health-based guidance level and proceeding with accrediting laboratories. Tier 1 methods to identify microplastics are being evaluated to help facilities identify if more in-depth monitoring is needed.

OPC Microplastics Strategy: SB 1263 was signed in September 2018 to develop and implement a Microplastics Strategy (prioritized research plan) including the assessment of the ecological risks of microplastics, an investigation of sources and pathways, as well as an evaluation of options to reduce microplastic pollution and a recommended policy.

Microplastics are very diverse in type and size. There are two main methods to identify and chemically confirm microplastics: particle counts and mass measurements. Common steps in microplastic analysis include sample collection, particle extraction, particle identification and categorization, pictures and measurements, and chemical analysis. Some analytical issues include how all microplastics within the sample need to be identified, there is a need to quantify plastics

down to as low a size as possible, need to know the characteristics of each microplastic, to avoid false positive and false negative identifications, avoid contamination, and to use a method that is accurate, fast and inexpensive while including a QA/QC. The issue concerning particle counting microplastics includes that particle numbers are not a conserved quantity of measure in that one piece of microplastic can break up into even smaller pieces, exponentially increasing the particle count despite coming from the same piece of plastic (the same plastic mass remains). Therefore, the smaller the particle size, the more particles will be found and reporting microplastics as counts-only is subjective. The evolution of microplastics analysis has propelled quantification by mass through ASTM methods such as sample collection, particle extraction and Pyrolysis GC/MS. The pathways and fluxes of microplastics through the system including in and out of wastewater treatment plants are mostly unknown. The majority of sources and loadings include vehicle tires and paint chips from maintenance ships and boats, roadways and buildings. The environmental risks of microplastics are unknown as well.

Within the next fiscal year there will be a Statewide Microplastics Strategy, an OPC CA POTW Microplastics study, standard methods for microplastics in drinking water, lab accreditation, 4-year monitoring requirements, and microplastic risk assessment recommendations to SWRCB. In 2026, there will likely be a Risk Assessment Framework, standardized methods, baseline occurrence data, investigation on sources and pathways, and recommended source reduction strategies. Water quality objectives considering microplastics will be upcoming.

### 3. Water Recycling Legislative/Regulatory Updates

Special Guest: Federal Update (*Greg Fogel/WaterReuse Association*)

Greg is the Policy Director of the national WaterReuse Association (WRA). Greg noted that the most significant, administrative (non-legislative) item underway is EPA's implementation of the National Water Reuse Action Plan (WRAP). It is a compilation of approximately 40 discrete actions led by non-Federal actors, stakeholder groups, states, industry leaders as well as Federal agencies. New actions are continually being added to the WRAP. There are many opportunities to get involved. EPA hosts an online platform to see who is involved in various WRAP activities. The best way to get involved is to reach out to the Action leaders or reach out directly to Greg [gfogel@waterreuse.org](mailto:gfogel@waterreuse.org). WaterReuse is involved in approximately 20 of the actions. More information on the national WRAP can be found here:

<https://www.epa.gov/waterreuse/water-reuse-action-plan>

Regulatory items of interest include the rewriting of the definition of Waters of the United States, which has been going on for many years. WRA is involved to make sure that the outcome works for water recycling, including projects that include spreading/percolation into or connected to Waters of the U.S.

Legislatively, WRA has been focused on the Infrastructure package, which was passed today in the Senate. It includes \$550B of new spending with \$1B for water recycling projects in the West that would go through USBR programs, of which \$550M would flow through Title XVI water reuse and reclamation grants program, and \$450M would be made available over 5 years through grants for very large water recycling projects that exceed \$500M. The second program will be set up much like the Title XVI program. WRA is continuing to try to secure more money for water recycling programs through the budget reconciliation process.

Primary focus for budget resolution and reconciliation package to include at least \$100M per year in direct spending for an alternative water source grants program that would be available for water

recycling projects, stormwater projects, etc. which would have a 50% Federal cost share rather than a 25% cost share, and would be administered by EPA rather than the USBR.

State Update: *(Raymond Jay/MWD)*

### California Budget

September 10<sup>th</sup> is the last day for any bill to be passed.

The Governor has declared a drought emergency in 41 of 58 counties, mostly in Northern California; Southern California has sufficient storage for the next two years. 2021 is the 10<sup>th</sup> driest year on record. The Governor's budget is \$262.6B including \$5.1B for water and drought resilience with \$400M towards recycled water and groundwater recovery. The Senate's \$3.4B proposal includes \$200M for recycled water.

### California Legislation

- SB 45 (Portantino): CECs: Wildfire Prevention, Safe Drinking Water, Drought Preparation and Flood Protection Bond Act of 2022 including a \$5.5 billion bond, and \$100 million for water recycling where WRCA requested \$1.5 billion for recycled water projects. This is now a 2-year bill.
- AB 1500 (Garcia): Safe Drinking Water, Wildfire, Drought, Flood Protection, and Workforce Development Bond Act of 2022 including a \$6.7 billion bond and \$300 million towards water recycling. This is now a 2-year bill.
- AB 377 (Rivas): Water quality: impaired waters
- AB 836 (Gabriel): CBSC: recycled water: nonpotable water systems where dual plumbing is required for newly constructed nonresidential buildings by 2023 and requires SWRCB to establish a large onsite nonpotable water system by 2024 for local jurisdictions without a local onsite program and a fee schedule. This is now a 2-year bill.
- AB 1434 (Friedman): Urban water use objectives: indoor residential water use where indoor water use requirements are lowered from the current 55 gpd by 2040. This is now a 2-year bill.
- SB 230 (Portantino): SWRCB: Constituents of Emerging Concern Program

### Regulatory Update

- Title 17 Cross Connection Control Handbook – includes use of swivel-ell; under evaluation by DDW; first public hearing on April 27<sup>th</sup> and adoption date uncertain.
- Water Use Efficiency (WUE) Implementation – recycled water variances and potable use credit workshops and potential variances for recycled water with over 1,200 mg/L TDS with a proposed adoption in October 2021.
- DPR Draft Regulations – joint letter prepared by several local agencies; comments and concerns submitted 6/25/2021

## **4. Regulatory Agency Update**

### **a. State Water Board Division of Drinking Water Programs (Saeed Hafeznezami)**

- Direct Potable Reuse (DPR) Regulations Updates and Revisions to draft criteria. Planning for first expert panel meeting for Water Code and review proposed criteria and whether or not proposed criteria protects public health.

- Two-Day panel meeting hosted by EWRI. Meeting open to everyone to attend and listen in. Open Q&A session on second day of meeting.
- Additional information available here:  
[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2018/121118\\_7\\_final\\_amendment\\_oal.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf)

**b. Los Angeles Regional Water Quality Control Board** (*Steven Webb*)

- No updates.

**c. LA County Department of Public Health** (*Glenn Van Eekhout*)

- The Hyperion Water Reclamation Plant overflow spill created for odor in nearby neighborhoods and Public Health is addressing complaints.
- There is a purple pipe supply shortage; regular white PVC can be adapted with purple identification tape can be used in the meantime.
- The SMURRF Plant in Santa Monica is going to be upgraded to send water to treatment plant to produce Title 22 water. Extended shutdown at end of year and will put in place a temporary water makeup line, which DPH approved. SMURRF will be offline for a period of time.
- Last week there was a complaint regarding a construction site regarding yellow water to restroom trailers. Recycled water line was incorrectly connected to a domestic line which was then connected to a pressure washer. DPH found that there was no protection to the domestic water lines. Backflow preventers were thus required on site. Construction sites need to be approved for recycled water only for designated applications in the permit.

**5. California State Section Update** (*Rafael Villegas*)

- Last WaterReuse CA Board of Trustees Meeting on May 14, 2021
  - Increase in dues for FY22
  - Nominating committee have spent much time discussing nominees for the upcoming Board
- 2021 WaterReuse Annual Conference – At a Glance
  - 48 Technical Sessions
  - 7 Panel Presentations
  - 2 Tours
  - Many networking opportunities
  - Located centrally downtown in the JW Marriott Hotel
  - Presentation Topics
    - RO Concentrate and Minimization and Disposal (4 presentations)
    - Declining Flows (3 presentations)
    - Direct Potable Reuse (2 presentations)
    - Planning and Implementation (5 presentations)
    - Non-Potable Reuse (5 presentations)
    - Potable Reuse Challenges and Solutions (8 presentations)
    - Artificial Intelligence and Real-Time Monitoring (5 presentations)
    - Groundwater Replenishment (5 presentations)
  - Panel Discussions
    - Same but different – 3 CA Utilities Share What’s Most Important for Reuse Projects



- Bioanalytical Screening in Recycled Water – Current Status, Challenges and Opportunities
- Multi-Pronged Approach to Make Technology Work for Regulatory Success of DPR
- Partnerships for Success with the Regional Recycled Water Program
- Alternative Approaches for Chemical and Pathogen Control in CA DPR Projects
- Water Reuse Communications in 2021 and Beyond: Developments and Best Practices
- Facility Tours
  - Albert Robles Center for Water Recycling and Environmental Learning (In-Person Tour)
  - Regional Recycled Water Advanced Purification center (Live Hosted Virtual Tour)
- WRCA Chapter Leadership Summit 9/21/21
  - 7 CA Chapter Leadership Summit (during annual conference)
  - Roundtable Discussions
- CA Water Conservation
  - Governor Newsom calls for voluntary 15% reduction in water use
  - Executive Order N-10-21
  - 50 of the state's 58 counties under the drought state of emergency
- 2022 CA Plumbing Code Joint Comment Letter
  - WRCA and Irvine Ranch Water District (IWRD) submitted joint letter
  - Changes to CA Plumbing Code impacts dual plumbing buildings
  - Requested changes in four sections

## 6. Chapter Updates (*Judi Miller*)

The April 2021 Member Meeting Summary to be approved during October's meeting.

Announcements from the member committee included:

- New Chair Announcements
  - Technical Topics Committee Chair
    - Alex Franchi [Alex.Franshi@aecom.com](mailto:Alex.Franshi@aecom.com)
  - New Membership Committee Chair
    - Everett Ferguson [eferguson@wrd.org](mailto:eferguson@wrd.org)
- Volunteer Opportunities
  - Meeting Summary Preparation
  - Virtual Lobby Networking Host
- Emerging Professionals Committee Update (*Alex Waite*) [Alex.Waite@SMGOV.net](mailto:Alex.Waite@SMGOV.net)
  - Everyone is welcome to our monthly happy hour sessions!
    - Third Thursday of the month at 5:00 pm – next is June 24<sup>th</sup>

Membership is at the national level of the WaterReuse Association. While most of our LA Chapter participants are members via their employer, participation in the Chapter is not contingent on WaterReuse membership. However, certain activities (such as voting and holding leadership positions) are restricted to members only.



If you would like further information about your organization becoming a WateReuse member, please contact Erin Carr, Director of Membership at [ecarr@watereuse.org](mailto:ecarr@watereuse.org) or 571.445.5505.

**7. Membership Roundtable** (*Jared Lee*)

Looking for a virtual host for the February and April meetings.

The Membership Roundtable is an opportunity for agencies to share their accomplishments and challenges with, or seek input from, the LA Chapter WR members.

**8. Next Meetings**

- October 12, 2021 – Host: TBD; Sponsor: TBD
- December 7, 2021 – Host: TBD; Sponsor: TBD – In-person and Virtual (Hybrid)

**9. Adjournment** ..... 1:00 p.m.

**Los Angeles Chapter Officers for 2019/2021**

Fred Gerring, President	626-319-1107
Jared Lee, Vice President	626-379-8443
Judi Miller, Secretary/Treasurer	213-228-8236
Rafael Villegas, Chapter Trustee	213-367-1014
Raymond Jay, Past-President	213-217-5777

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**Meeting Attendees**

<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>ORGANIZATION</b>
Shahnawaz	Ahmad	SA Associates
Jessica	Arm	Metropolitan Water District of Southern CA
Erik	Avila	Los Angeles Department of Water and Power
Elisha	Back	Woodard and Curran
Erika	Bensch	LACSD
Matt	Bequette	City of LA
Robert	Bowcock	Integrated Resource Management, Inc.
Flor	Burrola	City of Los Angeles, LA Sanitation and Environment
Amanda	Cauble	Central Contra Costa Sanitary District
Susan	Chang	City of Los Angeles/ Environmental Monitoring Division
Denise	Chow	City of Los Angeles, LASAN
Xiaofei	Cui	Los Angeles Regional Water Quality Control Board
Tracey	Dinh	LADWP
Nasir	Emami	LA Sanitation and Environment
Zeynep	Erdal	Black and Veatch
Hannah	Ford	Brown & Caldwell
Kellie	Fortner	City of San Luis Obispo
Steve	Friedman	HDR
Jesus	Gonzalez	LADWP
Andrew	Han	LADWP
Nichole	Horton	City of Pomona
Bob	Huizenga	Burbank Water and Power
Gil	Hurwitz	Black & Veatch
azya	jackson	City of Los Angeles   LA Sanitation & Environment
Jennifer	Jacobus	ESA
Raymond	Jay	Metropolitan
Darrell	Johnson	Las Virgenes Municipal Water District
Kirstin	Kale	Brown and Caldwell
Madeline	Kelsch	Los Angeles Department of Water and Power
Olga	Krel	CITY OF LOS ANGELES
Steven	Kuo	LADWP
Tricia	Lee	State Water Board



**Los Angeles Chapter of the WaterReuse Association**  
**August 10, 2021 MEETING SUMMARY**



<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>ORGANIZATION</b>
Qiong	Lei	City of Los Angeles
Scott	Lynch	Jurupa Community Services District
Guy	Meiri	IOSight
Judi	Miller	Jacobs
Kimia	Nader	City of Los Angeles
Jeremy	Neill	Coombs-Hopkins Company
Mariam	Panasyan	City of LA Sanitation
Brianna	Plancarte	Los Angeles Department of Water and Power
Carrie	Poytress	Montecito Sanitary District
Abraham	Razon	City of Los Angeles
Heather	Rhee	Long Beach Water Department
Julie Ann	Robinson	GWP/Water Quality
Richard	Ruyle	Glendale Water&Power
Shahrouzeh	Saneie	City of Los Angeles- Department of Public Works-LASAN
Vamsi	Seeta	Jacobs
Farzaneh	Shabani	Carollo
Romy	Sharafi	Woodard & Curran
Sudi	SHOJA	Engineering Solutions Services
Camille	Stephens	K&A
Kevin	Stewart	LADWP
Nick	Teague	City of San Luis Obispo
Rafael	Villegas	LADWP
Alex	Waite	City of Santa Monica
Bob	Yamaguchi	Walnut Valley Water District
Azita	Yazdani	Exergy Systems, Inc.
Alex	Zaragoza	Rowland Water District
John	Zhao	Las Virgenes MWD
Rick	Zimmer	Eurofins

**TOTAL: 60**